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ABSTRACT

The paper reviews 34 behavioral treatment studies (1967-1983) examining reduction of aggressive behavior in mentally retarded people. Research reviewed was limited to treatment of physically aggressive responses such as hits, kicks, bites, chokes, scratches, and throwing objects by persons designated as mentally retarded. Among results reported are that a variety of techniques were employed and all reported decreases in aggressive behavior; only 21 articles included an experimental design; outcome rates showed substantial decreases, although some aggressive behavior usually remained; and non-aversive treatments included reinforcement, extinction, and changes in the physical environment. Differential reinforcement was combined with a variety of aversive consequences such as reprimands, time out, and overcorrection. Details were generally lacking about use of tranquilizing and anticonvulsant drugs. The paper points out the need for information on treatment of adults with low-frequency, high intensity aggression, those who live in community residences, and those with histories of successful aggression. (CL)

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Behavioral Treatment of Aggression in the Mentally Retarded: A Review

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Paper presented at the meeting of the American Psychological Association, Toronto, August, 1984.

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Behavioral Treatment of Aggression in the Mentally Retarded: A Review

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Behavioral treatment studies, examining reduction of aggressive behavior by mentally retarded people, are reviewed in the present paper. Aggression is a serious problem for the retarded individual, peers, staff members, and neighbors, resulting in impaired social relationships, lost educational/vocational opportunities, retaliatory attacks, psychotropic medications, contact with the criminal justice system, and diminished opportunity for community living. Research reviewed was limited to treatment of physically aggressive responses such as hits, kicks, bites, chokes, scratches, and throwing of objects by persons designated as mentally retarded. Such behavior may be found in 20 to 40% of the retarded population, both inside and outside of institutions.

A total of 34 studies, published between 1967 and 1983, were located; they included 79 male and 60 female subjects described as aggressive. The modal article contained a single subject while 5 studies accounted for 95 subjects. Approximately 80% of subjects were aged 21

years or younger and more than 90% were institutionalized; subjects were, predominantly, described as severely or profoundly retarded. Major features of the studies are contained in the accompanying table.

A variety of techniques were employed, both singly and in combination, and all reported decreases in aggressive behavior. However, only 21 articles included an experimental design: 13 withdrawal designs, 7 multiple baselines, and one with group-statistical comparisons. The remaining articles represented various types of case study, most frequently consisting of baseline-treatment without a reversal. Reliability measures were reported in 20 articles, 15 reported on generalization, sometimes anecdotally, and only 14 included follow-up data.

Response rates were included for 30 individuals and average response rates for 5 groups with a total of 61 subjects. Such rates varied widely but only 7 subjects displayed baseline rates of less than one per day. Aggression was eliminated, at least for the period of observation, in 7 instances. Outcome rates did show substantial decreases, often approaching elimination. However, some aggressive behavior usually remained.

Of the various techniques and combinations employed, all were operantly based and only six failed to include a contingent, aversive stimulus. Non-aversive treatments included differential reinforcemnt, extinction, and changes in the physical environment. Differential reinforcemnt was also combined with a variety of aversive consequences such as reprimands, brief physical restraint, response cost, time out, and several forms of overcorrection; such consequences were also used alone and in varying combinations. Forms of time out were emphasized in 12 studies, overcorrections in 6, contingent shock in 4, and response costs in 3. Ammonia spirits and an eyescreen were featured in 2 recent reports. Also, 17 articles contained information concerning treatment methods which had failed.

Tranquilizing and anticonvulsent drugs are frequently given to aggressive, mentally retarded, people. Only 13 articles made any mention of such drugs and details were usually lacking. Two studies contained systematic variation of drugs with behavioral treatment.

A number of techniques were shown to be effective with appropriate experimental designs or through replication. However, little has been published on low-frequency aggression, on older people, or on those in

community residences. Information is needed on treatment of adults exhibiting low-frequency, high-intensity aggression, those who may reside in relatively open settings, and those with long histories of successful aggression. Treatment options may be further constrained by the relative physical abilities of aggressive adults and those who must treat them, lack of sufficient, trained, and motivated personnel in typical settings, and requirements for use of least restrictive methods. Finally, interactions of drugs with behavioral treatments require further exploration.

Reference	N	Age/ Sex	Design	Rel.	Starting Rate	Outcome Rate	Generalization	Follow Up	Drug Status	Other Interventions/Comments
Positive Reinforcement (PR)										
Frankel, et al. (1976)	1	7/F	ABACAD	90%	7/day	.42/day		104 days		TO, failed
Luiselli & Reisman (1980)	2	8/M 6/M	MHL/behaviors	80%	4.8/15 min 1.2/15 min	.5/15 min .44/15 min				
PR + Double Space										
Boe (1977)	24	8-19/F	ABCADBCE CE	+	11% of 20 sec ints.	1% of 20 sec ints.				PR noncontingent; extra toys, failed
PR + Compliance Training										
Mace, et al. (1983)	1	19/M	A/BC/BC (GT)/BC/ C/A(GS)	100%	16/session	0	across settings & therapists	8 mos		
Extinction										
Martin & Foxx (1973)	1	22/F	ABA	>90%	4/15 min	0/15 min	across settings		prior to study	seclusion, failed
Withdraw Demands, Reinforcement (Pos. & Neg.), Extinction										
Carr, et al. (1980)	2	14/M 9/M	ABAB	75-100%	121/5 min 43/10 min	near 0 9.8/10 min			various, prior	TO, Feingold diet, failed
Reprimand + PR										
Paluck & Esser (1971)	21	5-10/M	Group ANOVA	68-85%			across settings			behavior increased without reprimand
Repp & Dietz (1974), Experiment 2	1	8/M	ABAB	92%	.23/min	.02/min				

Reference	N	Age/ Sex	Design	Rel.	Starting Rate	Outcome Rate	Generalization	Follow Up	Drug Status	Other Interventions/Comments
PR + Brief Restraint										
Luiselli, et al. (1979)	1	11/M	AB	-	7.6/hour	0/hour		20 days		IRO alone during baseline
Rapport, et al. (1983)	1	14/F	ABCDCD	94%	10-18/day	0-4/day	across persons & settings	8 mos	Carbamazepine	drugs alone, drugs withdrawn, failed
Response Cost (RC) + Drug Withdrawal										
Breuning, et al. (1980)	18	17-71/ 7M;11F	MBL/ subjects	87-93%	Mean = 48/ week	Mean=4/ week			various psychotropics	drugs + RC, failed/ double-blind, placebo
PR + RC + Reprimand										
Repp & Dietz (1974), Experiment 3	1	13/M	AB	97%	.08/min	.002/min				
Time Out (TO) + PR										
Bostow & Bailey (1969)	1	7/M	ABAB	92%	4-75/30 min	near 0	across settings		during baseline	restraint removed for daily sessions
Luiselli & Greenridge (1982)	1	12/F	ABCD	83%	7.9/day	0/day		7 mos		seclusion> partition> nonexclusion
Luiselli, et al. (1983)	1	15/M	MBL/ settings	86%	64.5/day	<1/day	across settings	209 days		PR alone had some effect
Peniston (1975)	10	14-34/M	ABAB	88-93%	35% of 60 sec ints.	0	across settings	21 weeks		
Repp & Dietz (1974), Experiment 1	1	12/M	ABAB	93%	.19/min	.01/min		treatment continued		
Vukelich & Hake (1971)	1	18/F	ABCDE	near 100%	8/hour	near 0			Mellaril & Haldol	restraint removed for daily sessions

Reference	N	Age/ Sex	Design	Rel.	Starting Rate	Outcome Rate	Generalization	Follow Up	Drug Status	Other Interventions/Comments
TO										
Calhoun & Matherne (1975)	1	7/F	ABACACA	-	0-24/hour	0-4/hour		5 sessions		FR2 & FR5 schedules
Clark, et al. (1973)	1	8/F	MEL/ behaviors	68-	13 10-sec ints./hr	near 0				partial TO schedules
Hamilton, et al. (1967)	1	17/F	B	-	18/mo	2/mo				
Pendergrass (1971)	1	5/F	ABCDEBFB F	88%	2.6/min	near 0				intermittant TO
White, et al. (1972)	20	7-21 M=11-6 2M:1F	ABACADA	80%						15 min = 30 min TO, 1 min failed
TO + RC										
Burchard & Barrera (1972)	6	15-19/ M	ABCDE	-						larger RC=30 min TO & others = baseline
FR + Restitution										
Polvinale & Lutzker (1980)	1	13/M	MEL/set-tings & times	100%	2-36/25 min	0	across persons	6 mos		
Restitution										
Foxx & Azrin (1972)	1	22/F	AB	2 obs.	6/day	near 0	across persons		prior to study	reprimand + TO in baseline
Required Relaxation (RR)										
Webster & Azrin (1973)	6	20-52/ 3M;3F	AB	2 obs.	Mean = 7/day	near 0			each had 1 or more	

Reference	N	Age/ Sex	Design	Rel.	Starting Rate	Outcome Rate	Generalization	Follow Up	Drug Status	Other Interventions/Comments
PR + Forced Exercise										
Davidson-Gooch (1980)	1	17/M	AB	-	4/day	.47/day	across settings			DRO;reprimand;RC; seclusion—failed
RR + Positive Practice										
Plaska & Ragee (1979)	3	17-25/	MBL/ subjects	-	Mean= 26/mo	Mean=8.5/ mo	across settings	still treated	decrased or ended	
Social Isolation + PR + RR + Overcorrection										
Foxx, et al. (1980)	1	23/M	ABC	2 obs.	90% of days	5% of days	persons and settings		Thorazine reduced	Various methods failed, previously
Ammonia Spirits										
Doke, et al. (1983)	1	8/M	ABAB	80%	Mean=19.7% of 10 sec intervals	near 0	failed to generalize	14 mos	prior to study— Dilantin	PR in classroom. Corporal punishment & others failed.
Eyescreen + Physical Restraint + PR										
Apsche, et al. (1983)	1	17/F	MBL/ behaviors	95%	Mean=92/ day	near 0	across settings	1 yr		DRO;restraint;TO; OC—all failed
Electric Shock										
Ball, et al. (1975)	2	13/F 30/F	AB	-	88/mo 54/mo	25/mo 22/mo			various drugs	
Birnbrauer (1968)	1	14/M	B	+					prior to study	Release from restraint for sessions
Brandsma & Stein (1973)	1	24/F	AB	-	35/30 min	4/yr	across settings	1 yr	various drugs	Remained in seclusion
Risley (1968)	1	6/F	B	-	2.3/day	0/day				

References

Apsche, J., Bacevich, R., Axelrod, S., & Keach, S. (1983). Use of an eyescreen (blindfold) as a timeout procedure. AABT Mental Retardation Newsletter, 1, 3-8.

Ball, T. S., Sibbach, L., Jones, R., Steele, B., & Frazier, L. (1975). An accelerometer-activated device to control assaultive and self-destructive behaviors in retardates. Journal of Behavior Therapy and Expermental Psychiatry, 6, 223-228.

Birnbrauer, J. S. (1968). Generalization of punishment effects--A case study. Journal of Applied Behavior Analysis, 1, 201-211.

Boe, R. B. (1977). Economical procedures for the reduction of aggression in a residential setting. Mental Retardation, 15, 25-28.

Bostow, D. E., & Bailey, J. B. (1969). Modification of severe disruptive and aggressive behavior using brief time-out procedures. Journal of Applied Behavior Analysis, 2, 31-37.

Brandsma, J., & Stein, L. (1973). The use of punishment as a treatment modality: A case report. Journal of Nervous and Mental Disease, 156, 30-37.

Breuning, S. E., O'Neill, M. J., & Ferguson, D. G.

(1980). Comparison of psychotropic drug, response cost, and psychotropic drug plus response cost procedures for controlling institutionalized retarded persons. Applied Research in Mental Retardation, 1, 253-268.

Burchard, J. D., & Barrera, F. (1972). An analysis of time out and response cost in a programmed environment. Journal of Applied Behavior Analysis, 5, 271-282.

Calhoun, K. S., & Matherne, P. (1975). The effects of varying schedules of time-out on aggressive behavior of a retarded girl. Journal of Behavior Therapy and Expermental Psychiatry, 6, 139-143.

Carr, E. G., Newsom, C. D., & Binkoff, J. A. (1980). Escape as a factor in the aggressive behavior of two retarded children. Journal of Applied Behavior Analysis, 13, 101-117.

Clark, H. B., Rowbury, T., Baer, A. M., & Baer, D. M. (1973). Time-out as a punishing stimulus in continuous and intermittant schedules. Journal of Applied Behavior Analysis, 6, 443-455.

Davidson-Gooch, L. (1980). Autism reversal: A method for reducing aggressive-disruptive behavior. Behavior Therapist, 3, 21-23.

Doke, L., Wolery, M., & Sumberg, C. (1983). Treating chronic aggression: Effects and side effects of response-contingent ammonia spirits. Behavior Modification, 7, 531-556.

Foxx, C. L., Foxx, R. M., Jones, J. R., & Kiely, D. (1980). Twenty-four hour social isolation: A program for reducing the aggressive behavior of a psychotic-like retarded adult. Behavior Modification, 4, 130-144.

Foxx, R. M., & Azrin, N. H. (1972). Restitution: A method of eliminating aggressive-disruptive behavior of retarded and brain damaged patients. Behaviour Research and Therapy, 10, 15-27.

Frankel, F., Moss, D., Schofield, S., & Simmons, J. (1976). Case study: Use of differential reinforcement to suppress self-injurious and aggressive behavior. Psychological Reports, 39, 843-849.

Hamilton, J., Stephens, L., & Allen, P. (1967). Controlling aggressive and destructive behavior in severely retarded institutionalized residents. American Journal of Mental Deficiency, 71, 852-856.

Luiselli, J. K., & Greenidge, A. (1982). Behavioral treatment of high-rate aggression in a rubella child.

Journal of Behavior Therapy and Experimental Psychiatry, 13, 152-157.

Luiselli, J. K., Helfen, C. S., Pemberton, B. W., Colozzi, G., & Donellon, S. (1979). Treatment of stereotyped and aggressive behaviors of retarded children using reinforcement and response-contingent restraint. Scandinavian Journal of Behaviour Therapy, 8, 103-113.

Luiselli, J. K., Myles, E., & Littman-Quinn, J. (1983). Analysis of a reinforcement/time-out treatment package to control severe aggressive and destructive behaviors in a multihandicapped Rubella child. Applied Research in Mental Retardation, 4, 65-78.

Luiselli, J. K., & Reisman, J. (1980). Some variations in the use of differential reinforcemnt procedures with mentally retarded children in specialized treatment settings. Applied Research in Mental Retardation, 1, 277-288.

Mace, F. C., Kratochwill, T. R., & Fiello, R. A. (1983). Positive treatment of aggressive behavior in a mentally retarded adult: A case study evaluation. Behavior Therapy, 14, 689-696.

Martin, P. L., & Foxx, R. M. (1973). Victim control of aggression of an institutionalized retardate.

Journal of Behavior Therapy and Experimental Psychiatry, 4, 161-165.

Paluck, R. J., & Esser, A. H. (1971). Controlled experimental modification of aggressive behavior in territories of severely retarded boys. American Journal of Mental Deficiency, 76, 23-29.

Pendergrass, V. E. (1971). Effects of length of time-out from positive reinforcement and schedule of application in suppression of aggressive behavior. The Psychological Record, 21, 75-80.

Peniston, E. (1975). Reducing problem behaviors in the severely and profoundly retarded. Journal of Behavior Therapy and Experimental Psychiatry, 6, 295-299.

Plaska, T., & Ragee, G. (1979). The intensive training project: A program to prepare aggressive and disruptive residents for community placement. In L. A. Hamerlynk (Ed.), Behavioral systems for the developmentally disabled: II. New York: Brunner/ Mazel.

Polvinale, R. A., & Lutzker, J. R. (1980). Elimination of assaultive and inappropriate sexual behavior by reinforcement and social-restitution. Mental Retardation, 18, 27-30.

Rapport, M. D., Sonis, W. A., Fialkov, M. J., Matson, J. L., & Kazdin, A. E. (1983). Carbamazepine and behavior therapy for aggressive behavior: Treatment of a mentally retarded, postencephalitic adolescent with siezure disorder. Behavior Modification, 7, 255-265.

Repp, A. C., & Dietz, S. M. (1974). Reducing aggressive and self-injurious behavior of institutionalized retarded children through reinforcement of other behaviors. Journal of Applied Behavior Analysis, 7, 313-325.

Risley, T. R. (1968). The effects and side effects of punishing the autistic behaviors of a deviant child. Journal of Applied Behavior Analysis, 1, 21-34.

Vukelich, R., & Hake, D. F. (1971). Reduction of dangerously aggressive behavior in a severely retarded resident through a combination of positive reinforcement procedures. Journal of Applied Behavior Analysis, 4, 215-225.

Webster, D. R., & Azrin, N. H. (1973). Required relaxation: A method of inhibiting agitative-disruptive behavior of retardates. Behaviour Research and Therapy, 11, 67-78.

White, G. D., Nielsen, G., & Johnson, S. M. (1972).

Timeout duration and the suppression of deviant behavior in children. Journal of Appled Behavior Analysis, 5, 111-120.